



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.        | CONFIRMATION NO.       |
|---|-------------|----------------------|----------------------------|------------------------|
| 10/777,678  | 02/13/2004  | Junzo Tokimitsu      | 1614.1385                  | 5877                   |
| 21171   | 7590        | 02/28/2008           |                            |                        |
| STAAS & HALSEY LLP<br>SUITE 700<br>1201 NEW YORK AVENUE, N.W.<br>WASHINGTON, DC 20005 |             |                      | EXAMINER<br>DOAN, DUYEN MY |                        |
|   |             |                      | ART UNIT<br>2152           | PAPER NUMBER           |
|   |             |                      | MAIL DATE<br>02/28/2008    | DELIVERY MODE<br>PAPER |

- Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/777,678

Applicant(s)

TOKIMITSU ET AL.

Examiner

Duyen M. Doan

Art Unit

2152

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/13/2004.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

***Claims 1-22 are presented for examination.***

### ***Priority***

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

The information disclosure statement (IDS) submitted on 2/13/2004, the information disclosure statement is being considered by the examiner.

### ***Specification***

The abstract of the disclosure is objected to because improper language.  
Correction is required. See MPEP § 608.01(b).

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be a summary of the invention, not a recitation of a claim. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The invention concerns," "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

For this instance, applicant's abstract recites claim 1 verbatim.

### ***Claim Objections***

Claim 6 is objected to because of the following informalities: there is a period between the word server and on, not the end of the claim (see MPEP 608.01).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5, 8 cite "An information processing apparatus connected to each server on a user's side via a predetermined backbone communication network...including access to a predetermined data storage device" and "An information processing apparatus connected with a predetermined request processing apparatus via a predetermined local communication network...including access to a predetermined ..." respectively, claims 5,8 lack of the transition phrase (see MPEP 2111.03), it is difficult to identify which is the preamble, and which limitations constitute the claim invention.

The dependent claims are depended on the rejected base claims, and are rejected for the same rationale.

For the purpose of examination, examiner interprets including is the transition phrase, whatever after the word including is the claim limitations.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 11, 14 currently cite, "a computer program causing a computer to execute the steps of ...", the claimed program is not falling within a statutory category of invention.

The dependent claims are depended on the rejected base claim and therefore rejected for the same rationale.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 5-6, 8, 10-12, 14, 16-18, 20, 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Kizhepat (us pat 7,263,108) (hereinafter Kiz).

**As regarding claim 1**, Kiz discloses a network file server comprising a data storage device (see figure 1, storage 22a-22d, col.2, lines 53-56);

a request processing part (see Kiz fig.1, storage controller 26) connected to each server (see figure 1, hosts 30a-30b) on a user's side via a predetermined backbone communication network (see figure 1, see col. 3, 5-10, network 36, LAN), receiving a request from the server on the user's side for data processing including access to said data storage device (see col. 3, lines 14-18, hosts computer send/receive request to storage controller 26 and in turn access to the storage 22a-22d, also see figure 1),

and issuing an instruction to a storage device management part for analyzing and responding to said request (see figure 1, storage controller connects to RAID controller, also see col.2, lines 60-67, storage controller 26 (request processing) pass request to the physical storage controller 24, and in turn the physical storage controller controls the read/write operation by the storage device 22);

and the data storage device management part connected with said request processing part via a predetermined local communication network (see col.3, lines 53-61, storage controller 26 connects to the physical storage controller 24 over a network), and executing predetermined processing including access to said data storage device based on the instruction issued by said request processing part (see col.2, lines 60-67 the physical storage controller 24 controls the read/write operation by the storage device 22, based on the request passes from the storage controller 24).

**As regarding claim 2,** Kiz discloses said request processing part has a function of converting the request for data processing including access to the storage device issued by the server on the user's side into an instruction corresponding to a logical

configuration in said data storage device (see Kiz col.4, lines 43-54, storage controller 26 receive metadata command from the hosts and translate it into block command); and said storage device management part has a function of converting the instruction corresponding to the logical configuration in the data storage device received from said request processing part into an instruction corresponding to a physical configuration in the data storage device (see Kiz col.2, lines 63-67, physical storage controller 24 receive block level storage command and generates device-dependent storage commands for storage device 22a-d).

**As regarding claim 5**, Kiz discloses an information processing apparatus connected to each server on a user's side via a predetermined backbone communication network, receiving a request from the server on the user's side for data processing including access to a predetermined data storage device (see Kiz figure 1, hosts 30 connect to storage controller 26, also see col. 3, lines 14-18, hosts computer send/receive request to storage controller 26), and issuing an instruction to a storage device management part for analyzing and responding to said request (see col.2, lines 60-67, storage controller 26 (request processing) pass request to the physical storage controller 24, and in turn the physical storage controller controls the read/write operation by the storage device 22).



**As regarding claim 6**, Kiz discloses the processing apparatus having a function of converting the request for data processing including access to the storage device issued by the server on the user's side into an instruction corresponding to a logical configuration in said data storage device (see Kiz col.4, lines 43-54, storage controller 26 receive metadata command from the hosts and translate it into block command).

**As regarding claim 8**, Kiz discloses an information processing apparatus, connected with a predetermined request processing part via a predetermined local communication network (see col.3, lines 53-61, storage controller 26 connects to the physical storage controller 24 over a network), and executing predetermined processing including access to a predetermined data storage device (see col.2, lines 60-67, physical storage controller 24 connects to storage devices 22 a-d) based on an instruction issued by the predetermined request processing part see col.2, lines 60-67, storage controller 26 (request processing) pass request to the physical storage controller 24, and in turn the physical storage controller controls the read/write operation by the storage device 22).

**As regarding claim 10**, Kiz discloses the information processing apparatus having a function of converting the instruction corresponding to the logical configuration in the data storage device received from said request processing part into an instruction corresponding to a physical configuration in the data storage device (see Kiz col.2, lines

63-67, physical storage controller 24 receive block level storage command and generates device-dependent storage commands for storage device 22a-d).

**As regarding claim 11**, Kiz discloses a computer readable program causing a computer to execute the steps of: receiving from a server in a user's side a request for data processing including access to a predetermined data storage device (see col.3, lines 14-17, hosts 30—30b send/receive storage command to storage controller 26, storage controller 26 receives command); and issuing an instruction for a predetermined storage device management part connected via a predetermined local communication network for analyzing and responding to said request (see figure 1, storage controller connects to RAID controller, also see col.2, lines 60-67, storage controller 26 (request processing) pass request to the physical storage controller 24, and in turn the physical storage controller controls the read/write operation by the storage device 22).

**As regarding claim 12**, Kiz discloses converting the request for data processing including access to the storage device issued by the server on the user's side into an instruction corresponding to a logical configuration in said data storage device (see Kiz col.4, lines 43-54, storage controller 26 receive metadata command from the hosts and translate it into block command).

**As regarding claim 14**, Kiz discloses a computer readable program causing a computer to execute the steps of:

executing predetermined data processing including assess to a predetermined data storage device based on an instruction issued by a request processing device connected via a predetermined local communication network (see col.2, lines 60-67 the physical storage controller 24 controls the read/write operation by the storage device 22, based on the request passes from the storage controller 24).

**As regarding claim 16**, Kiz discloses converting the instruction corresponding to the logical configuration in the data storage device received from said request processing part into an instruction corresponding to a physical configuration in the data storage device (see Kiz col.2, lines 63-67, physical storage controller 24 receive block level storage command and generates device-dependent storage commands for storage device 22a-d).

**As regarding claim 17**, Claim 17 is rejected for the same rationale as claim 11.

**As regarding claim 18**, Claim 18 is rejected for the same rationale as claim 12.

**As regarding claim 20**, Claim 20 is rejected for the same rationale as claim 14.

**.As regarding claim 22**, Claim 22 is rejected for the same rationale as claim 16.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4, 7, 9, 13, 15, 19, 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kizhepat (us pat 7,263,108) (hereinafter Kiz) in view of Yamamoto (us pat 6,779,063) (Hereinafter Yama).

**As regarding claims 3,9,15,21**, Kiz discloses the invention substantially as claimed in claim 1, 8, 14, however Kiz does not disclose a cache and when data requested by said request processing part occurs in said cache, reads the data from said cache without actually accessing the data storage device, and transfers the read data to said processing part.

Yama discloses the concept of having a cache, and check the cache to see if the requested data resides in the cache memory, if so, the system will access the data in the cache and forward it to the requester (see Yama col.5, lines 42-50).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the cache concept of Yama to the system of Kiz, because both Kiz and Yama teach the invention about the storage system. By having a cache would reduce the processing time and resource for the request.

**As regarding claims 4, 7, 13, 19,** Kiz discloses the invention substantially as claimed in claim 1, 5, 11, however Kiz does not discloses a cache and when data requested by said server on the user's side occurs in said cache, reads the data from said cache without transferring the processing request to the storage device management part, and transfers the read data to said server on the user's side.

Yama discloses the concept of having a cache, and check the cache to see if the requested data resides in the cache memory, if so, the system will access the data in the cache and forward it to the requester (see Yama col.5, lines 42-50).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to combine the cache concept of Yama to the system of Kiz, because both Kiz and Yama teach the invention about the storage system. By having a cache would reduce the processing time and resource for the request.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Application/Control Number:  
10/777,678  
Art Unit: 2152


Page 14

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duyen M. Doan whose telephone number is (571) 272-4226. The examiner can normally be reached on 9:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner  
Duyen Doan  
Art unit 2152  
2/4/2008

  
BUNJOB JAROENCHONWANIT  
SUPERVISORY PATENT EXAMINER